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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,663	06/21/2001	Shantha Sarangapani	103.215.118	4750
23483	7590	12/23/2005	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP			PAK, JOHN D	
60 STATE STREET			ART UNIT	
BOSTON, MA 02109			PAPER NUMBER	

1616

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,663

Applicant(s)

SARANGAPANI ET AL.

Examiner

JOHN PAK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-9,11-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,4,7,8,11,12 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,9 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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This Office action is in response to applicant's amendments and remarks of 12/1/2005. In view of applicant's amendments and remarks, and upon reconsideration, all outstanding grounds of rejection are hereby withdrawn. As a result, the FINALITY of the Office action of 7/28/2005 is hereby withdrawn. However, several new grounds of rejection must be applied, as set forth hereinbelow.

Claims 1-2, 4-5, 7-9, 11-13, 15-20 are pending in this application.

Claims 1-2, 4, 7-8, 11-12 and 15-20 stand withdrawn from further consideration as being directed to non-elected subject matter. Cancellation of these claims would expedite the further handling of this application at the time of the next Office action.

Claims 5, 9 and 13 will presently be examined.

Claim Rejections under 35 USC 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 9 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) Claim 5, line 3 recites "a laminating layer free of activated carbon **or** providing a physical barrier" The conjunction "or" does not make sense in the present claim text.

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(2) Claims 5 and 9 recite for the chemical deactivating formulation 15-60 weight percent of "copper vanadium." Is there a comma missing there of it that an alloy of copper?

(3) All claims recite alternative species in non-standard Markush language. The accepted Markush language is "selected from the group **consisting of** ... and"

(4) Claim 9, line 7 recites "0 to 20 23 percent by weight of a plasticizer"

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5, 9 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Upon further review, it is now recognized that virtually all of the presently claimed features seem to have been derived from some unexplained or unclear combination of the originally filed disclosure. Applicant has provided no explanation or support for the following features.

(1) Claims 5, 9 and 13 recite various percentages for all the different components. The Examiner cannot determine the specification support for such specific numerical percentages and ranges. Nowhere in the originally filed disclosure is there any mention of such numerical percentages and ranges. If applicant derived these numbers from examples or combination of examples, applicant must provide a clear explanation as to how each claimed percentage numbers and ranges were obtained. In the absence of such an explanation, the percentages and ranges recited in the rejected claims are deemed to be new matter, which do not find adequate descriptive support from the originally filed disclosure.

(2) 1-100 nm silver or silver-copper alloys in claims 5, 9 and 13 do not find descriptive support from the originally filed disclosure. While nano-sized silver and 50-70 nm for silver is disclosed, 1-100 nm for silver and silver-copper alloy has not been conveyed by the originally filed disclosure.

(3) The specific organization of the deactivation composition, as presently claimed, cannot be found in the originally filed disclosure. Nowhere is there an originally filed disclosure that conveys all of the claimed ingredients in such specific combination and order.

(4) The specific organization (includes specific ingredients, percentages, and all those specific embodiments deposited on the chemical deactivating composition or laminating layer) of the antimicrobial composition, as presently claimed, cannot be

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found in the originally filed disclosure. Nowhere is there an originally filed disclosure that conveys all of the claimed ingredients in such specific combination and order.

(5) For the antimicrobial formulation, oxides, phosphates, citrates and pyrithiones of silver, copper, zinc and bismuth were not all disclosed in the originally filed disclosure.

Additionally, it appears that "parabenzoic acid esters" were not originally disclosed, at least in the manner used in the instant claims. Mere disclosure of butyl and octyl esters does not provide descriptive support for all of "esters" (see specification page 16, lines 13-14).

(6) From the above discussion it is evident that applicant has taken extreme liberties with the originally filed disclosure in coming up with all the claimed features, as currently presented. At this time, the Examiner is unable to verify the original descriptive support for any of the above noted features. If applicant believes descriptive support is found in the examples, applicant is advised to present a clear and detailed explanation as to how some specific numbers found in some examples provide support for all of the broadly drawn and reorganized claimed features, as currently pending.

For these reasons, the claims are determined to be lacking in adequate descriptive support.

Claim Interpretation & Comments on Prior Art

Claim Interpretation: at the outset, the Examiner shall set forth his interpretation of the term "laminating layer." The following specification disclosure relative to "laminating layer" is noted:

Page 4, lines 3-5: "laminating layer in the composite membrane that would allow water vapor to permeate while completely blocking organic vapors."

Page 4, lines 17-20: "a 'triple defense' system where antimicrobials provide the biocidal action, the catalytic materials provide chemical deactivation and the laminating layer provides a physical barrier to chemical vapors while allowing moisture."

Page 15, first paragraph: "The PTFE is laminated with the special hydrophilic cross-linked polyvinylalcohol layer that is impermeable to CBW agents but highly permeable to water vapor."

Sentence bridging pages 19-20: "These PTFE films in turn were processed using a special laminating procedure that further incorporated ICET's formulations as a sandwich between two ePTFE membranes containing about 02[sic]-1% of one of the formulations from table II."

The Encyclopedia of Chemistry defines "laminates" as "composite materials consisting of two or more superimposed layers bonded together" (page 294, left column).

Therefore, the Examiner shall interpret "laminating layer" as a layer that is a laminate, which is a composite material consisting of two or more superimposed layers bonded together. Applicant's specification disclosure is consistent with this interpretation.

Claim Interpretation: Additionally, it is noted that the chemical deactivating formulation requires 5-25 wt% 1-100 nm sized metallic particles selected from the group consisting of silver and silver-copper alloys and 15-50 wt% of metal compounds selected from titanium, copper, molybdenum, silver, copper, vanadium, manganese and iron. The Examiner notes the recitation of silver in both ingredients and the use of different terminology therein. The Examiner shall interpret the first silver component (sized 1-100 nm) as either silver metal per se (i.e. not a silver compound) or silver-copper alloys and the second component, when the metal is silver, as silver compounds (i.e. does not include the uncompounded silver metal per se).

Similarly, the antimicrobial formulation requires 5-27.5 wt% 1-100 nm sized metallic particles selected from silver and silver/copper alloys. Again, the Examiner shall interpret this component as either silver metal per se (i.e. not a silver compound) or silver-copper alloys

Comments on Prior Art: Based on above claim interpretation, the Examiner cannot find any prior art that discloses or suggest a laminating layer as claimed, wherein the claimed chemical deactivating composition and/or claimed antimicrobial composition is/are deposited on the laminating layer, as claimed. In particular, the combination of the claimed amounts of the 1-100 nm sized silver or silver-copper alloy and the additional metallic compounds in the chemical deactivating formulation and/or the antimicrobial formulation, which is deposited on a laminating layer that is free of

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activated carbon for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer, is deemed to be novel and unobvious.

Although the above comments are noted for the record, applicant must still resolve the new matter issues noted earlier in this Office action. It is the Examiner's position at this time that applicant does not have adequate descriptive support for the subject matter that is now found to be novel and unobvious.

Applicant is reminded of the drawing requirements – see the PTO-948 from the Office action of 7/28/2005.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Gary Kunz, can be reached on **(571)272-0887**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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